

What is claimed is:

1. A spacer discharging apparatus of an FED, comprising:
a discharge path for connecting an anode electrode and a spacer ground
5 electrode of an FED; and
a switch unit for selectively connecting the discharge path to discharge
electric charge charged in a spacer of the FED.
2. The apparatus of claim 1, wherein the switch unit is connected in
10 series between the anode electrode and the spacer ground electrode and
selectively turned on/off.
3. The apparatus of claim 1, wherein the switch unit applies a pulse
control signal in synchronization with a vertical synchronous signal to the anode
15 electrode during an interval where a voltage applied to the anode electrode is cut
off.
4. The apparatus of claim 1, wherein the switch unit applies a pulse
control signal in synchronization with a vertical synchronous signal to the anode
20 electrode during a blanking time period.
5. The apparatus of claim 4, wherein the blanking time period
indicates time during which no image is displayed on a screen of the FED or a
pulse duration of the vertical synchronous signal (V sync).

6. The apparatus of claim 4, wherein the pulse control signal is repeatedly applied at certain period intervals on the basis of the vertical synchronous signal.

5 7. The apparatus of claim 6, wherein the certain period is determined depending on a discharge state or a noise state of the FED.

8. The apparatus of claim 1, wherein the switch unit comprises:
a switch for selectively connecting the anode electrode and the spacer
10 ground electrode;
a buffer and inverter signal unit for outputting a control signal to control the switch; and
a transistor for outputting a driving current to drive the switch upon receiving a control signal from the buffer and inverter signal unit.

15 9. The apparatus of claim 8, wherein the switch is one of a high voltage relay, a high voltage switch and thyristor.

10 20 10. The apparatus of claim 9, wherein the switch is turned on when a current flows to the transistor, and turned off when no current flows to the transistor.

11. The apparatus of claim 1, further comprising:
a protection resistor connected between the anode electrode and a high
25 voltage power source unit applying a high voltage to the anode electrode.

12. The apparatus of claim 11, wherein the protection resistor has a resistance value of a few K ~ scores of M[ohm].

5 13. The apparatus of claim 11, further comprising:
a discharge controlling resistor for controlling discharge time and a residual voltage.

14. The apparatus of claim 13, wherein the discharge controlling
10 resistor is connected between the switch unit and the spacer ground electrode.

15. The apparatus of claim 13, wherein the discharge controlling resistor is connected between the switch unit and the anode electrode.

15 16. A spacer discharging method of an FED comprising:
forming a discharge path connecting an anode electrode and a spacer ground electrode of an FED; and
selectively connecting the formed discharge path to discharge electric charge charged in a spacer.

20 17. The method of claim 16, wherein in order to discharge electric charge from the spacer, a pulse control signal in synchronization with a vertical synchronous signal is applied to the anode electrode during a blanking time period.

25 18. The method of claim 17, wherein the pulse control signal is

repeatedly applied at certain period intervals according to a discharge state or a noise state of the FED.

19. The method of claim 16, wherein in order to form the discharge
5 path, a protection resistor is connected between the anode electrode and a high voltage power source unit for applying a high voltage to the anode electrode.

20. The method of claim 19, wherein in order to form the discharge
path, a discharge controlling resistor for controlling discharge time and a residual
10 voltage is additionally connected between the anode electrode and the spacer ground electrode.